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ABSTRACT

The French vocational baccalaureat was created in response to labor market changes and technological innovations of the early 1980s. Unlike France's general and technical baccalaureats, the vocational baccalaureat normally guarantees immediate entry into working life. It is generally prepared for in 2 years after an initial period of vocational training recognized by a Vocational Studies Certificate (BEP). At the beginning of the 1985-86 academic year, only 1,300 individuals were preparing for vocational baccalaureats. Just 8 years later, more than 75,000 individuals are enrolled. In 1990 and 1992, all individuals who completed the VB track in 1988 and 1990, respectively, were surveyed regarding their employment since completing the training program. The survey response rates were 59% and 53%, respectively. The studies established that, although the school-to-work transition of completers was more favorable than those of their counterparts with lower levels of occupational qualification, their work activities and job mobility had not measured up to expectations. Two years after having completed their training, most vocational baccalaureat holders held jobs classified as "worker jobs." One major reason was said to be that, despite the technological changes that have occurred in the workplace, organizational contexts have not changed greatly. (MN)

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A FRENCH NEWSLETTER FROM CEREQ AND ITS ASSOCIATED CENTRES

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Vocational *Baccalauréat* Holders: What Positions in the Company?

Unlike the general or technical baccalauréats, *the vocational* baccalauréat *normally guarantees an immediate entry into working life. Generally prepared for in two years after an initial period of vocational training recognised by a Vocational Studies Certificate (BEP),*[1] *it was intended to attest to skills adapted to the new technological demands and changes in the organisation of work. Does this new diploma meet the original goals? While vocational* baccalauréat *holders are successful in finding employment, the ways that the companies make use of them do not exactly coincide with the objectives underlying the creation of the diploma.*

THE CREATION OF THE VOCATIONAL *BACCALAUREAT*

The technological innovations of the early 1980s and the resulting modifications in the organisation of work soon brought out the labour market's lack of intermediate occupational qualifications between those of worker and technician. The problem was first posed in these terms by the Employers' Union of the Metalworking and Mining Industries (UIMM), which made a pressing demand for the quantitative and qualitative development of "technical *baccalauréats*". Its request, which emerged within the framework of the on-going dialogue between the public powers, responsible for initial vocational training France, on the one hand, and employers on the other, was based on two main arguments:

(1) the changing relations between service departments and production--tied to the development of new technological systems--would require new occupational knowledge for the operators: "a good level of general technical culture, an ability to acquire knowledge and develop it, and the multidisciplinary background that would permit the first two aspects to bear fruit;

(2) the existence of a large range of jobs between the worker and technician levels which could receive *baccalauréat*-holders. This space was not otherwise defined, but reference was made, for example, to "those who would be responsible for operating machines and automated units".[2] A working group, composed of representatives of companies from the different branches, concluded that the technical *baccalauréat* holders received exactly the kind of training that the companies seemed to need. This group thus proposed an increase in the number of students trained in the technical tracks and measures likely to encourages these *baccalauréat*-holders to make the school-to-work transition directly after their training rather than continuing their studies.

At that point, technical *baccalauréat* holders, notably in the manufacturing fields, were increasingly pursuing further studies after high school; augmenting the flow of students in these sections was thus not likely to provide a solution to the problem. But at the same time that the UIMM was making its request, the national education system was undertaking a reorganisation of the initial vocational training tracks and the employees' unions in the

1. See "The Educational System in France", *Training and Employment* 15, Spring 1994, p. 6, for a description of the place of the vocational *baccalauréat* in the French training system.

2. The goal was thus to train skilled workers capable of "mastering the technical systems that they use", in the words of Alain d'Iribarne (cited by Solaux 1990, p. 46). The guidelines give a more precise image of the goals assigned to the different vocational *baccalauréats*.

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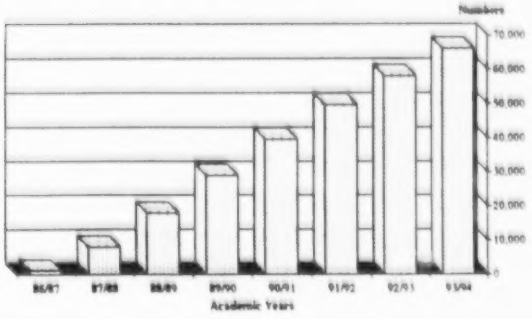
vocational high schools were calling for a modernisation and upgrading of the system. The desire for the extension of studies in the vocational high school was unanimous. The appointment of a new secretary of state for technical instruction in autumn 1984 was a clear statement of the government's intention to develop technical and vocational instruction and introduce *baccalauréat*-level training in the vocational high schools. Priority was given to "the promotion of the greatest number (i.e. 80% of a given age group at the *baccalauréat* level) but also the promotion of the best".[3] The Education-Company Mission (the future High Committee on Education and Economy, responsible for developping a better liaison between education and the world of production) was to give the "vocational *baccalauréat*" both its name and its final form: a two-year training programme after the initial vocational training courses, plus innovative pedagogical tools involving in-company experience. In spite of a very strong orientation towards the acquiring of practical know-how that is directly applicable to the productive activity, the vocational *baccalauréat* nonetheless constitutes an academic rank like the other *baccalauréats* and can therefore open the way to further studies.

VOCATIONAL *BACCALAUREAT* HOLDERS AND EMPLOYMENT

At the beginning of the 1985-86 academic year, there were only 1,300 young people preparing for a vocational *baccalauréat* after their BEP; eight years later, there were more than 75,000.

Numbers of Students Enrolled in Second-Year Vocational *Baccalauréat* Programme (Metropolitan France)



Source: DEP

The increase in the number of students was very rapid during the first years after the introduction of the diploma (about seven-fold between 1985-86 and 1986-87). Since then it has gradually slowed down and tended to level off. This overall trend hides significant differences from one training specialisation to another, however: while the secondary sector combines a smaller number of students with a very large range of training specialisations, the tertiary has a great number of students and a limited range of specialisations.

Numbers of Specialisations and Students in First-Year Vocational *Baccalauréat* (Public Education Only)

Sector	Subject Areas	Male Students	Female Students	Total Students
Secondary	31	22,915	1,779	24,694
Tertiary	16	9,679	22,959	32,638
Total	47	32,594	24,738	57,332

Source: DEP

Less than one-third of the young people trained benefit from the possibilities for continued study that they are entitled to, while 70 percent of them go directly from school to work, as can be seen from the two Céreq studies on young people coming out of these new training programmes.[4] These surveys also permit an evaluation of job entry among those who go directly into working life. For those completing the training programmes in 1988, the situation on the labour market developped favourably, and job entry was rapid. Those finishing in 1990, however, encountered difficulties in finding a permanent job (i.e., with an unlimited-term contract, or CDI) on a declining labour market.

Vocational Entry of Vocational *Baccalauréat* Holders in 1988 and 1990

Voc. Bac 1988	Oct 88	Feb 89	June 89	Oct 89	Feb 90	June 90	Oct 90
Job Sought	15.4	7.6	5.2	8.8	7.7	6.7	9.8
CDI Job	17.9	23.9	28.1	35.5	46.3	53.1	57.5
Other Contract	34.7	31.8	27.9	24.2	23.9	23.3	20.5
Voc. Bac 1990	**Oct 90**	**Feb 91**	**June 91**	**Oct 91**	**Feb 92**	**June 92**	**Oct 92**
Job Sought	19.8	13.2	8.7	11.6	11.5	9.5	16.6
CDI Contract	23.5	28.8	32.3	36.0	41.7	44.9	48.7
Other Contract	29.2	26.7	24.2	22.9	22.1	25.8	21.6

Source: Céreq/Oneva

3. Solaux 1990, p. 108.

4. Céreq conducted two successive surveys of individuals coming out of vocational *baccalauréat* tracks, the first in October 1990 dealing with individuals completing the training programme in June 1988, and the second in October 1992 with those finishing in June 1990. These surveys were conducted through three successive mailings, with those subjects who did not reply to the first or second mailing receiving a second or third request. From one survey to the other, the rate of replies diminished slightly, from 59 percent in 1990 to 53 percent in 1992.

The school-to-work transition of these young people remains more favourable than that of those on the labour market with a lower level of occupational qualification. As for the types of employment obtained, two years after the end of training, the class of 1990 basically held worker jobs (over two-thirds of the men with manufacturing specialisations) and clerical positions (more than 85 % of the women with tertiary specialisations). These young women were largely classified as "administrative employees in companies" (75 %), and their wages generally (56 %) ranged between four and six thousand francs monthly. Three-quarters of the young men with manufacturing specialisations and holding a worker job were classified as "skilled workers"; more than half of them received wages of between six and eight thousand francs monthly (between four and ten thousand francs in over 90 % of the cases).

ACTIVITY AND TRAINING: THE EXAMPLE OF THREE MANUFACTURING *BACCALAUREATS*[5]

If the vocational *baccalauréat* holders seem to benefit from a longer period of schooling, their work activities and job mobilities have not measured up to expectations. Thus, none of the *baccalauréat*-holders employed in manufacture was a "shop technician".[6] This fact cannot be explained solely by the youth of these diploma-holders or the recentness of their recruitment. The observation calls for other interpretations. First of all, it invites reconsideration of the extent of the transformations affecting the organisation of work. Second, it questions the way that the school has interpreted the consequences of technological transformations for the kinds of knowledge to be transmitted.

Limited Autonomy in Carrying Out an Activity

In the case of the processing industries, the creation of the vocational *baccalauréat* was supposed to respond to profound changes in the organisation of work, such as decentralised preparation, decompartmentalisation and/or integration of the different functions.[7] These changes were supposed to ensure greater autonomy for the operators (manufacturing or maintenance) by permitting them to deal with certain problems encountered in the course of their activity. These transformations are far from being accomplished, however. In mechanical machining units, for example, the vocational baccalauréat holders–like all skilled workers--rarely intervene in the development of computer programmes. This activity is closely supervised by planning technicians; as a result, the diploma-holders are mainly limited to making adjustments in the programme during the machining process.[8] In the operation of automated installations, in the sectors where the processes of integrating technical and service functions are the most advanced--electrical and automobile construction--repair tasks are being transferred to manufacturing. In this area, however, *baccalauréat*-holders are confronted with two restrictions that limit the scope of their activity. One is the hostility of the maintenance agents, who often seek to check this movement. More fundamentally, the process comes up against the constraint of the *baccalauréat*-holders' installation flows. The time alloted to them for effecting a repair is no more than a few minutes, and their role is thus limited in relation to that of the maintenance team.

Even the work of *baccalauréat*-holders employed as operational agents in the maintenance departments is also far from what had been expected. Nearly all of their work time (80 % on the average) is taken up by repair work. The diploma-holders are thus rarely available to work on improving the equipment, which is taken care of by the planning and maintenance offices. The rigid structure of the maintenance departments surveyed and the policy of rationalisation maintained within them, along with the reduced number of operational repair agents, hardly increases the job autonomy of the vocational *baccalauréat* holders.

In production and maintenance alike, many of the promised transformations have not been effected, and the processes of decentralisation/decompartimentalisation most often remain incomplete. The previous recruitment, characterised by the hiring of a great number of technicians with diplomas in the research/planning offices (both manufacturing and maintenance) have not greatly encouraged these transformations. It follows that the "shop technican" classification is not widespread, and when it exists, the activities of the employees thus classified are fairly removed from what the texts accompanying the creation of this title might suggest.

As a result, the conditions for the emergence of a "highly qualified skilled worker" to which the creation of the vocational *baccalauréat* were supposed to respond are far from being achieved. The studies carried out, moreover, show that the privileged objective of the companies is polyvalence, in the sense of enlarging the scope of an

5. This section includes material from a study based on interviews of manufacturing *baccalauréat* holders in the engineering and electrical specialisations. It covered thirty-six companies in the capital equipment sector.

6. A result of the collective bargaining of 1975, the title "shop technician", designating a highly skilled operator, served as a reference for creating the guidelines for certain manufacturing *baccalauréats*.

7. These issues are central to the guidelines for the diplomas considered here.

8. This situation is consistent with the use of technicians attached to the service departments to treat sensitive technical problems.

activity. The qualification of skilled workers is now being developped in terms of this kind of work and the forms it takes in the different activities more than in terms of greater occupational know-how, which would integrate a larger element of improvement relative to the product, the process and the equipment.

Practical Knowledge to Acquire

If the vocational *baccalauréat* holders most often have to function within organisational contexts that are still compartmentalised, they nonetheless intervene on recent equipment: the machining centre (for mechanical machining units), automated lines piloted by programmable robots (for installation operators with vocational *baccalauréats*). It cannot be inferred, however, that work on such equipment automatically translates into more complex interventions. The integration and automation of the equipment certainly increases their complexity. But these young people do not intervene on the control sectors, and their diagnosis is facilitated, for example, by the development of the repair assistance systems that increasingly equip these installations. As a result, the most sensitive breakdowns confronting these young people are quite often the most simple in technical terms: a matter of a broken or loose wire. What is more important in this case than the knowledge of a general method for intervening or the ability to read a programme is knowing the equipment. The recruitment of vocational *baccalauréat* holders is thus more likely to take the form of a guarantee (operation of the installation) or an adaptation to the changing supply of training in a context that involves reducing the adaptation time of young people recruited in a context of reduced numbers of employees (maintenance).

The present technological changes that relate mainly to the equipment's control and monitoring systems still do not rule out the know-how to be mobilised in a productive situation. Thus, in mechanical machining units, the ability to intervene during the machining process is strongly tied to the principles of mechanics and knowledge acquired from practice. The training of these baccalauréat-holders, with its emphasis on the mastery of control systems,[9] but also on certain additional tasks within their activity (monitoring, management), does not encourage the *baccalauréat*-holders' access to "shop technician" activities. When such activities exist, they require great experience in the work of machining preparation and operation. Conversely, this emphasis facilitates and re-enforces the diploma-holders' tendency to enter the service departments, which does not help to "upgrade" the role of the shop.

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The trend towards recruitment of young people with a vocational *baccalauréat* for jobs traditionally held by CAP- or BEP-holders may lead to continued downgrading of the new diploma. This risk is accentuated still further by the fact that the number of young people leaving school at the CAP/BEP level is declining because of the constant increase in the rate of further studies after these initial vocational training programmes. The promotion prospects for vocational *baccalauréat* holders employed in technician jobs is not likely to alter this trend a great deal. It could, however, be limited by a redefinition of the contents and forms of the training provided.[10] The success or failure of the vocational *baccalauréats* is just as much at stake within the company, through work organisation and recruitment choices.

Henry Eckert and Patrick Veneau

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9. The analyses carried out in terms of breakthrough and technological changes which accompanied the creation of this diploma have encouraged certain excesses, and these have had an impact on *baccalauréat*-holders in the mechanics field.

10. See **In Focus** below: "Towards a New Generation of Vocational *Baccalauréat* Holders".

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